

E.5 Radar/Airborne Doppler Radar Scientist (On-Board)

The on-board radar scientist (RS) is responsible for data collection from all radar systems on his/her assigned aircraft. Detailed operational procedures and check lists are contained in the operator's manual supplied to each operator. General supplementary procedures follow. (Check off and initial.)

E.5.1 Preflight

- ☒ 1. Determine the status of equipment and report results to the on-board lead project scientist (LPS).
- ☒ 2. Confirm mission and pattern selection from the on-board LPS.
- ☒ 3. Select the operational mode for radar system(s) after consultation with the HRD/RS and the on-board LPS.
- ☒ 4. Complete the appropriate preflight calibrations and check lists as specified in the radar operator's manual.

E.5.2 In-Flight

- ☒ 1. Operate the system(s) as specified in the operator's manual and as directed by the HRD/RS, unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO flight director or aircraft commander.

E.5.3 Postflight

- ☒ 1. Complete the summary check lists and all other appropriate check lists and forms.
- ☒ 2. Brief the on-board LPS on equipment status and turn in completed forms to the LPS.
- ☒ 3. Hand-carry all radar tapes and arrange delivery as follows:
 - a. Outside of Miami - to the HRD operations center (FGOC).
 - b. In Miami - to MGOC or to AOML/HRD. [Note: all data removed from the aircraft by HRD personnel should be cleared with the OAO flight director.]
- ☒ 4. Debrief at the appropriate operations center (FGOC or MGOC).
- ☒ 5. Determine the status of future missions and notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted.

*On plane
to 21 location*

9A091 - SHJ1P088P1

Form E-5
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Radar Scientist Check List

Flight ID 880916 H2
Aircraft # N42RP
Operators Ganache
Radar Tech. Jarvi

Number of digital magnetic tapes on board 23 1200'

Number of tape labels on board Enough

Component systems up and checked:

RDSC	_____	DSC1	_____
Computer	_____	DSC2	_____
DMTR1	<u>✓</u>	DMTR2	_____
LF	_____	R/T#	_____
TA	_____	R/T#	<u>201 DOPPLER</u>

Time correction between radar time and digital time DOPPLER IS 2 SECS AHEAD

Radar Postflight Summary

Number of digital tapes used: DMTR 1 _____
DMTR 2 _____

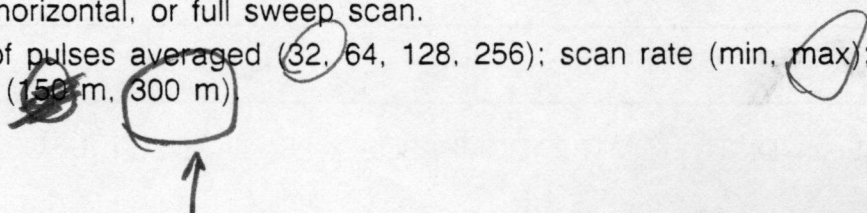
Significant recorder down time:

DMTR 1	_____	Radar LF	_____
DMTR 2	_____	Radar TA	_____

Other problems:

[illegible]

**Number of pulses averaged (32, 64, 128, 256); scan rate (min, max); range resolution (150 m, 300 m).



Doppler
HRD Radar Down-Time Log

Operator Camacho

Sheet ____ of ____

Item	Time Down	Time Up	Problem
			Doppler appeared to be
			semi incoherent. For most
			of flight. Brief period
			at the end with clean
			Doppler signal (Tape #10
			We recorded data, however,
			in case we can use it
			later.

Item List: DMTR1, DMTR2, COMP, RDSC, LF, TA, DSC1, DSC2.

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- ☒ 3. Select the operational mode for radar system(s) after consultation with the HRD/RS and the on-board LPS.
- ☒ 4. Complete the appropriate preflight calibrations and check lists as specified in the radar operator's manual.

E.5.2 In-Flight

- ☐ 1. Operate the system(s) as specified in the operator's manual and as directed by the HRD/RS, unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO flight director or aircraft commander.

E.5.3 Postflight

- ☐ 1. Complete the summary check lists and all other appropriate check lists and forms.
- ☐ 2. Brief the on-board LPS on equipment status and turn in completed forms to the LPS.
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- ☐ 5. Determine the status of future missions and notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted.

Radar Scientist Check List

Flight ID 88091642
Aircraft # N42RF
Operators Bupee/Gamache
Radar Tech. Jarvi

Number of digital magnetic tapes on board 22 2400'

Number of tape labels on board Enough

Component systems up and checked:

RDSC	<u>/</u>	DSC1	<u>/</u>
Computer	<u>/</u>	DSC2	<u>/</u>
DMTR1	<u>/</u>	DMTR2	<u>/</u>
LF	<u>/</u>	R/T#	<u>102 LF</u>
TA	<u>/</u>	R/T#	<u>201 DOPPLER</u>

Time correction between radar time and digital time ~~DOPPLER~~

Radar Postflight Summary

Number of digital tapes used: DMTR 1

DMTR 2

Significant recorder down time:

DMTR 1 Radar LF

DMTR 2 Radar TA

Other problems:

HRD Radar Tape Log

Flight 880916H2 Aircraft N42RF Operator Gamache Sheet 1 of 1

[illegible]

HRD Radar Down-Time Log

Operator _____

Sheet ____ of ____

Item	Time Down	Time Up	Problem

Item List: DMTR1, DMTR2, COMP, RDSC, LF, TA, DSC1, DSC2.

880916H2

1800 ~~GMT~~ Z

Doppler velocities look bad.
Ground velocity not stable around
0 m/s. Al Tarii working.
Also LFR/T just went out.
No replacement on 42. Let's hope.

⁴⁵
18~~00~~5 Gomeche photo #4
Out radar window

Doppler #1 1835-1852
W through eye

Doppler #2 18~~55~~ 1854 + 19 min

Doppler #3 1950-
N out of eye.
Descending.

Missed pass through eye.

Out of seat: hard to be 2 places
at one time

2035 We have had a
vader foul-up. The
~~second~~ kind that happens
when one tape drive
troubles up.

2048 There is very
discontaminated data on
tail now, due to problem
with Tape drive. Seems
alright now.

2059 - Doppler #6 is S. ~~to~~
along Texas coast toward
eye wall. Stopped early
at 2106 to get pass through
eye on next tape.

2108 Doppler #7 will be
pass through eye.